

# Distinguishing Special Purpose Glass Fibers

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## Special Purpose Fibers

**“Special-purpose glass fibres are limited production, small-diameter fibre products that are typically used for purposes other than insulation as in filtration media and batteries.”**

**IARC 2002 Monograph at page 327**

## Special Purpose Fibers

- **SPFs are limited production (< 1%) mostly older glass fibers consistently distinguished by**
  - **Greater fiber durability**
  - **Non-insulation use or application**
  - **Non-consumer customers and markets**
  - **Smaller average diameter (< 1 $\mu$ m)**
  - **Different chemical composition**
  - **Mostly different method of manufacture**

# Special Purpose Fibers

- **SPFs consistently distinguished by**
  - **Health effects researchers**
  - **Scientific bodies**
  - **Manufacturers**
  - **End users**
  - **Product stewardship professionals**

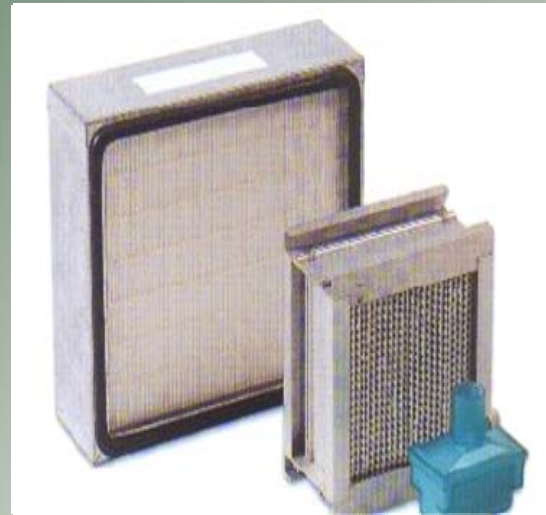
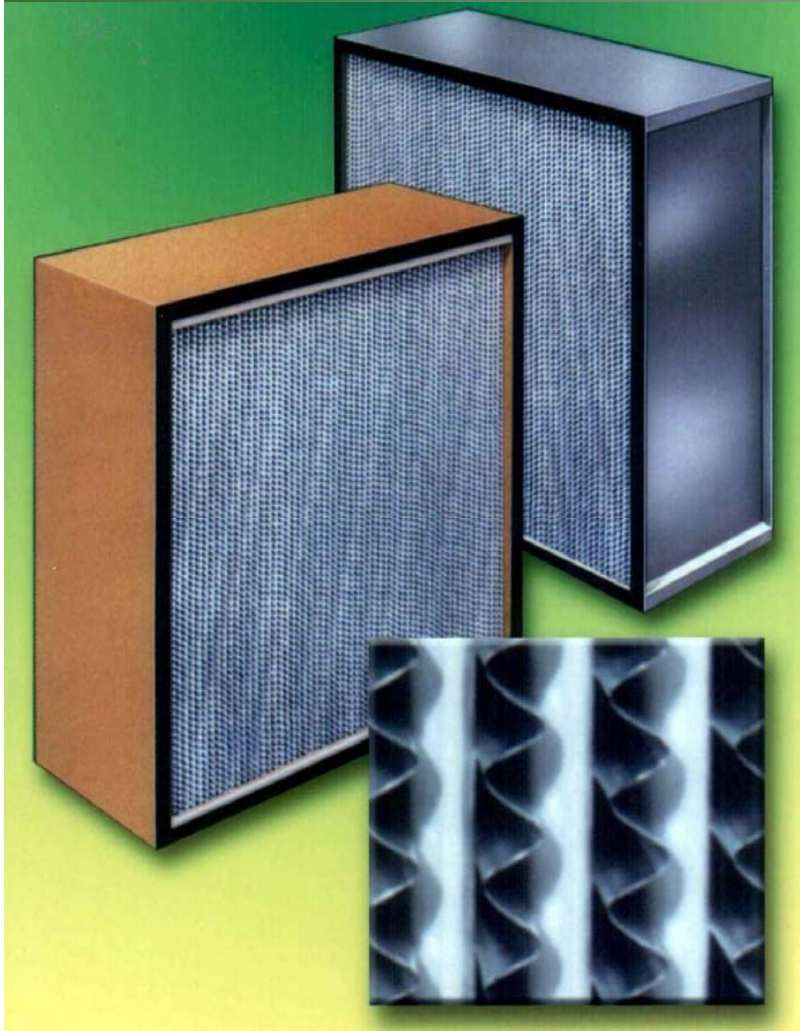
# Special Purpose Fibers

- **US SPF manufacturers**
  - **Johns Manville**
  - **Evanite**
  - **Lauscha**
  - **UPF (United Pacific Fiberglass)**

# Special Purpose Fibers

- **SPFs are consistently more durable**
  - *in vitro*  $k_{\text{dis}} < 85 \text{ ng/cm}^2\text{hr}^{-1}$
  - *in vivo*  $WT_{1/2} \geq 50 \text{ days}$

# Uses, applications and markets for SPFs





# Uses, applications and markets for SPFs



Callaway Nuclear Plant (source: AmerenUE)

